

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

IMPINJ, INC.,
Plaintiff,
v.
NXP USA, INC.,
Defendant.

Case No. 19-cv-03161-YGR

**ORDER GRANTING IN PART AND DENYING
IN PART MOTION FOR RECONSIDERATION**

Re: Dkt. No. 352

I. BACKGROUND

Pending before the Court is defendant NXP USA, Inc.’s (“NXP”) motion for reconsideration of the Court’s decision to grant summary judgment of validity of U.S. Patent No. 9,633,302 (“the ’302”). *See* Dkt. No. 352 (“Mtn.”). As the Court discussed at the pretrial conference held on June 23, 2023, the Court **GRANTS** the request to reconsider and revises its Order on Summary Judgment as to the scope of the impact in striking the opinions of NXP’s expert, Dr. Subramanian. (“MSJ Order,” Dkt. No. 339.) Given the Court’s reconsideration of the prior ruling, plaintiff Impinj, Inc. requested that the Court then rule on the that portion of the summary judgment motion which correlates to the same issue. The Court does.

For the reasons set forth below, the Court **GRANTS IN PART AND DENIES IN PART** the motion for reconsideration of the order on summary judgment and the corollary motions to exclude Dr. Subramanian and Scott E. Thompson, respectively. (Dkt. Nos. 233, 241.)

II. LEGAL STANDARD

Federal Rule of Civil Procedure 54(b) permits a court to revise orders that do not adjudicate all claims of all parties to an action. Civil Local Rule 7-9 permits any party to move “for reconsideration of any interlocutory order” on any of the following grounds: (1) that the law has materially changed between the time of the filing of the motion and the entry of the order for which the moving party is seeking reconsideration; (2) new material facts have emerged; or (3) the court has manifestly failed “to consider material facts or dispositive legal arguments” presented to the court.

III. DISCUSSION**A. The ’302**

In short, when the Court granted plaintiff’s motion to exclude certain opinions of Dr. Subramanian, it then granted summary judgment in favor of Impinj regarding both the validity of the ’302 claims and infringement thereof. This was error as plaintiff had not moved to exclude Dr. Subramanian’s opinions regarding the validity of the ’302 patent claims. Thus, the Court’s ruling was too broad.

1. Overview

The parties’ briefing on the issue of the validity of the ’302 is relatively short. Impinj is seeking summary judgment that the ’302 *is valid* in view of NXP’s counterclaim that it is not valid. With respect to NXP’s argument that the ’302 patent claims at issue are invalid, it asserts two grounds, namely that: (1) a person of skill in the art (“POSITA”) would be motivated to combine Eberhardt¹ with Cornell² or Ching-San³ as to render the patent invalid as obvious and (2) Nishigawa⁴ anticipates the ’302. For the reasons set forth below, the Court finds that summary

¹ See Dkt. No. 235-9, U.S. Patent No. 6,246,327, titled “Radio Frequency identification Tag Circuit Chip Having Printer Interconnection Pads.”

² See Dkt. No. 235-11, U.S. Patent No. 6,184,581, titled “Solder Bump Input/Output Pad for a Surface Mount Circuit Device.”

³ See Dkt. No. 235-13, U.S. Patent Application U.S. No. 2011/0139501, titled “Electronic Chip and Substrate with Shaped Conductor.”

⁴ See Dkt. No. 235-14, U.S. Patent No. 7,578,053, titled “Interposer Bonding Device.”

judgment is not appropriate as to NXP's first ground, but it is appropriate as to the second ground.

2. Motivation to Combine with Eberhardt

The parties do not dispute that Eberhardt alone does not render obvious or anticipate the '302. Impinj focuses on the point that both Cornell and Ching-San teach away from flip chip assembly techniques and argues that NXP ignores this fact. NXP disagrees.

According to Impinj and in response to Dr. Subramanian's invalidity argument that a POSITA would be motivated to combine Eberhardt with Cornell or Ching-San, Impinj argues that Eberhardt teaches away from flip chip assembly techniques⁵ while Cornell and Ching-San disclose flip chip techniques, putting the two in contrast. Furthermore, Eberhardt does not disclose anything concerning fluid flow and teaches that interconnection pads⁶ should have the largest area possible. For these reasons, no POSITA would be motivated to combine with Eberhardt.

More specifically, Impinj argues the teachings of Eberhardt, which includes incorporation of the U.S. Patent No. 6,091,332,⁷ differ from those of the '302. These include i) interconnection pads as large as possible and ii) the use of printing techniques rather than flip chip techniques. The Patent Trial and Appeal Board ("PTAB") agreed with the position that Eberhardt teaches away from flip chip techniques. *See* Dkt. No. 235-5, Ex. C to Impinj Partial Motion for Summary Judgment (Decision Denying Institution of *Inter Partes* Review) at 21. By contrast, Cornell does disclose flip chip implementation. Again, Impinj argues, no POSITA would be motivated to combine the two. *See AstraZeneca AB v. Mylan Pharms. Inc.*, 19 F.4th 1325, 1337 (Fed. Cir. 2021) (reasoning, in finding non-obviousness of challenged patent, that references that teach away may eliminate the possibility of a finding of obviousness) (internal citations and quotations

⁵ "Flip chip" assembly is a way that inlay (or tag) manufacturers attach integrated circuits ("IC") to an antenna to form an RFID tag or inlay. The process involves inverting an IC and pressing it onto the antenna, which is supported by an inlay or strap, usually with an adhesive between the IC and antenna.

⁶ According to Impinj, the purpose of these pads is to provide more coupling area between the inlay circuit traces and conductive traces on IC.

⁷ This priority patent also teaches away from flip chip techniques. *See* U.S. Patent No. 6,091,332 at 9:15-19 (expressly providing that the invention provides for an alternative to "costly flip chip technology").

1 omitted).

2 Further, with respect to the combination of Eberhardt and Ching-San, Impinj relies on the
3 PTAB's finding that Eberhardt does not teach anything about "flowing insulation material into the
4 channel or configuring the shape of the channel for any purpose, including for the purpose of
5 attaching the chip to the substrate." Decision Denying Institution of *Inter Partes* Review at 19.
6 Eberhardt does not include the use of any adhesive for attaching the interconnection pads to an
7 antenna. Impinj argues that Eberhardt's emphasis on increased surface area of the interconnection
8 pads is also distinguishing, all of which indicate that a POSITA would not combine.

9 Finally, Impinj argues that NXP misconstrues Eberhardt by relying on the Background
10 section of the patent, which merely explains flip chip assembly techniques, to argue that Eberhardt
11 is promoting such techniques. Furthermore, an express goal of Eberhardt, according to Impinj, is
12 teaching the enlargement of the surface area of the interconnection pads, which is absent from the
13 '302, and in fact opposed to its teachings because augmenting the width of the channel at its ends
14 decreases the pad connection area.

15 By contrast, NXP argues that Dr. Subramanian's report provides support for the position
16 that a POSITA would be motivated to combine Eberhardt with Cornell and/or Ching-San. *See*
17 Dkt. No. 273-3, NXP Additional Fact 15. NXP identifies paragraphs 889-897 and 907-913 of Dr.
18 Subramanian's report as relevant to the obviousness inquiry. At a high level, Dr. Subramanian
19 opines that Eberhardt and Cornell each teach ways to improve the bonding between an integrated
20 circuit and a conductor pattern on another substrate. *See* Dkt. No. 274-7, ("Subramanian Opening
21 Report") ¶ 890. Physically bonding and connecting the IC to the conductor pattern is the purpose
22 of the interconnection pads in Eberhardt, according to Dr. Subramanian, and the solder bumps of
23 Cornell serve the same purpose. Dr. Subramanian goes on to opine that both Eberhardt and
24 Cornell discuss flip chip assembly techniques, and he claims that nothing in Eberhardt teaches
25 away from using flip chip assembly.

26 On the flip chip assembly techniques, Dr. Subramanian's opinions are directed to his
27 understanding of the common purpose of Eberhardt and Cornell: to form a reliable connection.
28 *See id.* ¶ 893. He argues that the teachings of Cornell would allow for improved fluid flow in a

way that would only enhance the connection between the IC and the antenna and substrate. Dr. Subramanian opines that a POSITA would be motivated to modify the interconnection pads in such a way that would result in a more secure attachment, as suggested by Cornell. *See id.* ¶ 894.

Dr. Subramanian's opinions regarding Ching-San proceed in a similar fashion. He opines that Eberhardt and Ching-San are both directed to improving the bond between an integrated circuit and an external circuit. *See id.* ¶ 908. The conducting pins of Ching-San, according to Subramanian, serve the same function as the pads of Eberhardt. According to Dr. Subramanian, Ching-San provides a broader array of applications in that the circuit on the substrate is not limited to an antenna circuit. Dr. Subramanian opines that Ching-San instructs on the shape of conducting pins in order to improve the flow of conducting adhesive, similar to Eberhardt. *See id.* ¶ 909. Dr. Subramanian concludes, therefore, that a POSITA would understand that the flow improvement taught by Ching-San would improve the overall mechanical adhesion of the IC to the substrate regardless of the use of conducting pins or interconnection pads. *See id.* ¶ 910. Moreover, according to Dr. Subramanian, the use of pins or pads is simply a design choice. *See id.* ¶ 911.

The Court understands that the PTAB found that Eberhardt teaches away from flip chip techniques, at issue here. However, that decision is not binding. Thus, a factual dispute remains as to whether a POSITA would be motivated to combine the prior art references given the scope of the prior art, including whether it teaches away from the techniques of the '302 in a way that would render the '302 obvious. In short, the situation presents a classic example of a battle between experts. Summary judgment as to this ground for invalidity is denied.

3. Anticipation based on Nishigawa

With respect to the second ground, Impinj argued at summary judgment that in opining that Nishigawa discloses an IC substrate, Dr. Subramanian is contradicting NXP's express representation to the Court that an "IC substrate is part of the overall IC." Dkt. No. 78 at 5:18-21. The Court did not consider the argument as it had excluded Dr. Subramanian's opinions and ruled on that ground. Now that Dr. Subramanian's opinions are being considered for purposes of validity, the Court considers the merits of Impinj's arguments.

The issue here concerns claim construction. Courts routinely exclude expert testimony that conflicts with the Court’s claim constructions. *See, e.g., Guangzhou Yucheng Trading Co. v. Dbest Prod., Inc.*, No. CV 21-4758 JVS (JDEX) 2022 WL 17886016, at *7 (C.D. Cal. Dec. 6, 2022) (excluding opinions of expert that contradicted the Court’s claim construction).

A thing cannot be both separate and apart from the IC and also the IC substrate. To that end, the Court’s construction of an “IC substrate” as a “structure that provides support for the IC components” is inconsistent with an opinion that a structure completely separate and apart from the IC, yet providing support for it, can be the IC substrate.

Central to this dispute is the Court’s September 16, 2021 Claim Construction Order, which “resolved the parties’ dispute” regarding the interpretation of “IC substrate,” in favor of neither party. The Court’s construction “limits the substrate to immediately supporting materials.” The construction “structure that provides support for the IC components” therefore forecloses NXP’s argument that Nishigawa, which discloses a “sheet-like chip holding member” or a “strap” on which an IC itself is mounted, could anticipate the ’303 on the ground that the strap is the IC substrate. The thing which supports the IC components is the IC substrate and is part of the IC. It is not the IC itself and it does not support the entirety of the IC. That would be recursive.

Summary judgment as to this ground for invalidity is granted.

B. The Motion to Exclude Thompson

In its earlier MSJ Order, the Court denied as moot the motion to exclude Thompson. The Court similarly grants NXP’s request to reconsider that denial.

Thompson offers, in the paragraphs NXP sought to exclude, a rebuttal opinion to Dr. Subramanian’s opinion on Nishigawa. For the reasons discussed above, and because the Court grants summary judgment on anticipation, the motion to exclude Thompson is moot.

IV. CONCLUSION

For the reasons stated above, the Court **GRANTS** NXP’s motion for reconsideration.

In reconsidering the cross motions for summary judgment and the related motion to exclude Dr. Subramanian, the Court reinstates NXP’s defense of invalidity as to the ’302 claims but finds that as a matter of law, the ’302 cannot be invalid based on Nishigawa (second ground).


1 However, the Court will allow NXP to proceed with its invalidity arguments regarding the
2 motivation to combine Eberhardt and Cornell or Ching-San (first ground).

3 In reconsidering the motion to exclude Thompson, the request is denied as the motion
4 remains moot.

5 This terminates Docket No. 352.

6 **IT IS SO ORDERED.**

7 Dated: 6/28/2023

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11 YVONNE GONZALEZ ROGERS
12 UNITED STATES DISTRICT JUDGE
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